

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000717**Date Inspected:** 26-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island**CWI Name:** Sha Zhi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Mock-up 77 and 89**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Larry Viars was present to observe the Welding operations and Magnetic Particle Testing (MT) of the Caltrans Mock-up # 89.00 and # 114.00, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Caltrans QA Inspector observed ZPMC shop personnel performing Flux Core Arc Welding (FCAW) at Mock-up # 89.00 Skin Plate C sub assembly MA23 longitudinal plate Complete Penetration Joint (CJP) weld # 15 and 16. ZPMC certified welder Mr. Lei Lichao performed the above mentioned welding. ZPMC QA Inspector Mr. Shen Xue Jun stated that the welding procedure for the above mentioned weld joints was WPS-B-T-2231-B-U3-F. Caltrans QA Inspector Viars recorded the following welding variables for weld joint # 15, amperage 330, voltage 31.3, with a travel speed of 360. The following picture illustrates welding in progress on weld joint # 15.

Inspector Viars monitored the Heat Shaping of Mock-up 77.00 bottom diaphragm sub assembly flange section MA274. ZPMC QA Mr. Lei Tao stated the heat straightening report numbers used for flanges was HSR (CT) -009 and 010. Flange section was heated up to 500 degrees Celsius and pressure was applied from hydraulic jacks. The part was then allowed to cool to 100 degrees Celsius then pressure was released. Flange sections were placed in the diaphragm and measured for fit-up.

The Caltrans QA Inspector monitored welding operations of Mock-up # 89.00 Skin Plate C and heat shaping of diaphragm flange section # SA274. Caltrans QA Inspector observed that the welding and heat shaping appeared to be in general conformance with AWS D1.5 2002 requirements.

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# WELDING INSPECTION REPORT

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## Summary of Conversations:

As identified within the contents of this report.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Viars,Larry	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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